

Serial No. 08/325,145

in planes above and below the given voxel, are compared to said given voxel for contiguity; and

(c) identifying said contiguous group of voxels as potentially containing said object if a characteristic of said contiguous group has a predetermined value.

2. (Amended) A method as set forth in claim 1, further comprising the step of:

after step (f), further inspecting the three-dimensional volume to confirm the presence [or absence] of an explosive.

12. (Amended) An apparatus to [help] ascertain the presence [or absence] of an object in a three-dimensional volume represented by a plurality of voxels, wherein the object is smaller in at least one dimension than a linear dimension of the voxels, the apparatus comprising:

(a) a scanner to scan the object; and

(b) a processor which includes

(1) a contiguity identification module to determine a property of each of a plurality of voxels representing the three-dimensional volume and to identify voxels having similar values of said property to identify a contiguous group of voxels having said similar values using a contiguity evaluation process wherein, for a given voxel, voxels in the same plane as the given voxel, and in planes above and below the given voxel, are compared to said given voxel for contiguity; and

(2) an object identification module to identify said contiguous group of voxels as potentially containing said object if a characteristic of said contiguous group has a predetermined value.

20. (Amended) A method of detecting an explosive comprising the steps of:

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Amended
(a) scanning a three-dimensional volume to [determining] determine the density of each of a plurality of voxels representing the three-dimensional volume;

(b) connecting and labeling voxels of the plurality of voxels which have similar densities using an evaluation process wherein, for a given voxel, voxels in the same plane as the given voxel, and in planes above and below the given voxel, are compared to said given voxel for contiguity;

(c) determining at least one of the volume and the mass of each contiguous region of voxels having similar densities; and

(d) comparing at least one of the volume and the mass of each contiguous region having similar densities to at least one threshold and identifying each region which exceeds a threshold as a region potentially containing an explosive.

[Please add the following new claims:]

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21. A method as set forth in claim 1, wherein in said contiguity evaluation process differences between a property of said given voxel and a property of voxels in said planes above and below said given voxel, are employed to evaluate contiguity.

22. An apparatus as set forth in claim 12, wherein in said contiguity evaluation process differences between a property of said given voxel and a property of voxels in said planes above and below said given voxel, are employed to evaluate contiguity.

23. A method as set forth in claim 20, wherein in said evaluation process differences between a property of said given voxel and a property of voxels in said planes above and below said given voxel, are employed to evaluate contiguity.